

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 – 15 (Canceled)

16. (New) A composition for cleaning a semiconductor substrate, the composition comprising:

a fluoride containing compound selected from a fluoroboric acid; a compound of the general formula $R_1R_2R_3R_4NF$, where R_1 , R_2 , R_3 and R_4 are independently hydrogen, an alcohol group, an alkoxy group or an alkyl group; and mixtures thereof,

a buffer comprising an acid selected from a weak acid and a protonated base and a base selected from the group consisting of an amine, ammonia, ammonium hydroxide and an alkyl ammonium hydroxide in a molar ratio of the acid to the base that is substantially 1:1, and

optionally an organic polar solvent wherein the solvent is miscible in water wherein the composition has a pH that ranges from greater than 7.0 to about 11.0.

17. (New) The composition of claim 16 further comprising a corrosion inhibitor.

18. (New) The composition of claim 16 wherein the fluoride containing compound is the compound of the general formula $R_1R_2R_3R_4NF$.

19. (New) The composition of claim 18 wherein the compound is ammonium fluoride, tetramethyl ammonium fluoride, or tetraethyl ammonium fluoride.

20. (New) The composition of claim 16 wherein the buffer comprises the weak acid selected from abietic acid, aspartic diamide, aspidospermine, N,N-bis(2-hydroxyethyl)-2-aminoethane sulfonic acid, 4-chloro-2-(2'-thiazolylazo)phenol, chrome dark blue, diacetylacetone, 5,5-diallylbarbituric acid, 1,3-dichloro-2,5-dihydroxybenzene, 2,3-dichlorophenol, 3,4-dihydroxybenzaldehyde, 2,6-dihydroxypurine, 1,10-dimethoxy-3,8-dimethyl-4,7-phenanthroline, N,N'-dimethylethylenediamine-N,N'-diacetic acid, dimethylhydroxytetracycline, 2,6-dimethyl-4-nitrophenol, ethyl-2-mercaptoacetate, 5-ethyl-5-pentylbarbituric acid, 5-ethyl-5-phenylbarbituric acid, glycine hydroxamic acid, hexamethyldisilazane, 1,2,3,8,9,10-hexamethyl-4,7-phenanthroline, 4-hydroxybenzaldehyde, 4-hydroxybenzonitrile (4-cyanophenol), 10-hydroxycodine, N-(2-hydroxyethyl)piperazine-N'-ethansulfonic acid ("HEPES"), 5-hydroxy-2-(hydroxymethyl)-4H-pyran-4-one, 2-hydroxy-3-methoxybenzaldehyde, 4-hydroxy-3-methoxybenzaldehyde, 3-hydroxy-4-nitrotoluene, 4-methoxy-2-(2'-thiazolylazo)phenol, 2,2'-methylenebis(4-chlorophenol), 4-(methylsulfonyl)phenol, methylthioglycolic acid, 1-methylxanthine, 3-(N-morpholino)propanesulfonic acid, 2-nitrohydroquinone, 2-nitrophenol, 4-nitrophenol, 2-nitropropane, phenosulfonephthalein, 3-phenyl- α -aniline methyl ester, pyrocatecholsulfonephthalein, syvic acid, 1,3,5-triazine-2,4,6-triol, 2,4,5-trichlorophenol, 3,4,5-trichlorophenol, 2-[tris(hydroxymethyl)methylamino]-1-ethansulfonic acid, tyrosine amide, tyrosine ethyl ester, uridine-5-diphosphoric acid and benzotriazole.

21. (New) The composition of Claim 20 wherein the weak acid is HEPES, benzotriazole or vanillin.

22. (New) The composition of claim 16 wherein the buffer comprises the protonated base selected from alanine methyl ester, 2-aminoacetamide, 4-amino-3-bromomethylpyridine, 2-aminobutanoic acid methyl ester, 1-aminoisoquinoline, 4-aminoisoxazolidine-3-one, 2-amino-3-methylpyridine, 2-amino-4-methylpyridine, 2-amino-5-methylpyridine, 2-amino-6-methylpyridine,

2-aminoquilone, n-tert-butanaline, codeine, 2-cyanoethylamine, 2-cyclohexyl-2-pyrroline, N,N-diethyl-o-toluidine, dihydroergonovine, N,N'-dimethyl-p-toluidine, emetine, ergometrine, 2-ethyl-2-pyrroline, N-ethylveratramine, glycine ethyl ester, glycine methyl ester, glyoxaline, harmine, heroin, isopilocarpine, leucine amide, leucine ethyl seater, methoxycarbonylmethylamine, 1-methylimidazole, 4-methylimidazole, N-methylmorpholine, morphine, N-pentylveratriamine, N-propylveratriamine, serine methyl ester, solanine, 2,3,5,6-tetramethylpyridine, thebaine, 3-thio-S-methylcarbide, triethanolamine, 2,3,6-trimethylpyridine, 2,4,6-trimethylpyridine, tris(2-hydroxyethyl)amine, L-valine methyl ester, vetramine, and vitamin B₁₂.

23. (New) The composition of Claim 16 comprising an organic, polar solvent.

24. (New) The composition of Claim 23 wherein the solvent is one selected from an amine, a sulfoxide, a sulfone, an amide, a lactone, a pyrrolidone, an imidazolidinone, a glycol, a glycol ether and mixtures thereof.

25. (New) The composition of Claim 23 wherein the solvent is dimethylacetamide.

26. (New) The composition of Claim 23 wherein the solvent is N-methylpyrrolidone.

27. (New) The composition of Claim 16 wherein the pH ranges from greater than 7.0 to about 9.0.

28. (New) The composition of Claim 27 wherein the pH ranges from greater than 7.0 to about 8.4.

29. (New) An aqueous, buffered fluoride-containing composition, comprising;
from 0.1% by weight to 20% by weight of a fluoride containing compound selected from fluoroboric acid; a compound of the general formula $R_1R_2R_3R_4NF$, where R_1, R_2, R_3 and R_4 are independently hydrogen, an alcohol group or an alkyl group; and mixtures thereof,
up to 70% by weight of an organic polar solvent wherein the solvent is miscible in water
a buffer comprising an acid selected from a weak acid and a protonated base and a base selected from the group consisting of an amine, ammonia, ammonium hydroxide and an alkyl ammonium hydroxide in a molar ratio of the acid to the base that is substantially 1:1, and
from 1% by weight to 92% by weight water,
wherein the aqueous, buffered, fluoride containing composition has a pH that ranges from greater than 7.0 to about 11.0.

30. (New) The aqueous, buffered, fluoride containing composition of Claim 29 wherein the water is present in amounts ranging from 1% by weight to 70% by weight.

31. (New) A method of stabilizing oxide and metallic etch rates of an aqueous, fluoride containing composition, the method comprising:

providing the composition comprising a fluoride containing compound selected from fluoroboric acid; a compound of the general formula $R_1R_2R_3R_4NF$, where R_1, R_2, R_3 and R_4 are independently hydrogen, an alcohol group or an alkyl group; and mixtures thereof; and an organic polar solvent;

adding a buffer to the composition to adjust the pH of the composition to a range of from greater than 7.0 to about 11.0 wherein the buffer comprises an acid selected from a weak acid and a protonated base and a base selected from the group consisting of an amine, ammonia, ammonium hydroxide and an alkyl ammonium hydroxide in a molar ratio of the acid to the base that is substantially 1:1.